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ABSTRACT

The Peralta Community College District (PCCD) is comprised of four comprehensive, public, two-year colleges serving a diverse student population of 28,000. In response to state-mandated matriculation research requirements, and to an invitation to participate in a national study of student outcomes in urban community colleges, PCCD conducted a transcript analysis of spring 1990 degree recipients to determine the time-to-degree for these graduates. In addition, spring 1985 and spring 1980 graduate cohorts were examined to determine emerging trends. The spring 1990 cohort consisted of 472 graduates while the 1985 and 1990 cohorts consisted of 747 and 645 degree recipients respectively. Study findings include the following: (1) the mean time-to-degree for graduates had increased from 7.61 terms in 1980 to 9.13 terms in 1990; (2) since 1980, the percentage of Asian, Filipino, and Hispanic/Latino students receiving degrees had increased by 62%, 33%, and 57% respectively, while the percentages of African Americans and Whites receiving degrees had decreased by 13% and 10% respectively; (3) for the 1990 cohort, Native American and White students earned degrees in the least number of terms, while Asians had the most number of units per term; (4) females, who tended to take fewer units per term, took slightly longer to graduate than males; (5) only 2% of the 1980 cohort took a long break in enrollment (6 or more years), compared with 7% in 1985, and 11% in 1990; and (6) steady increases in the number of students indicating the intention to transfer suggests a growing use of the associate degree as a transfer degree. Summary results of a graduate follow-up survey, detailed data tables, and references are included. (PAA)

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Peralta Community College District

Time-To-Degree

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Time-To-Degree in the Peralta Community College District

1990/1985/1980 COMPARISON

The time-to-degree for graduates in the Peralta Community College District has increased in the past ten years. The median number of terms to degree has increased one term, the mean has increased 1.5 terms since 1980. This increase in time-to-degree holds for all entering age groups. On average, students who entered a Peralta college before age twenty in the 1990 graduating cohort took 1.41 terms longer to graduate than students who entered in that same age group in the 1980 cohort. In the 20-24 year entering cohort, on average, it now takes students 2.09 terms longer; 25-34 years, 1.44 terms longer; >34 years, .97 terms longer (the 1985 >34 entering cohort took 1.60 terms longer to graduate than the 1980 cohort).

Terms	1990	1985	1980
Median	8	8	7
Mean	9.13	8.6	7.61
Minimum	2	1	1
Maximum	29	30.8	19.5
Total Graduates	472	747	645

Although students earned the degree in fewer terms in 1980, they did not appreciably take any more units per term, on average, than students in the 1990 cohort. The increase in time-to-degree is attributable to the fact that students are now earning more units for the degree. Whether 1990 graduates had to take more remedial courses to improve basic or critical thinking skills before they were able to concentrate on their degree or major requirements than was the case for 1980 graduates or were simply taking more courses not related to the major by choice or because of indecision or lack of direction regarding requirements or recommended course sequence for the major remains to be determined.

Among the 1990 graduates, there were 13% more students who entered a Peralta college before age 20, than 10 years prior. The 1990 graduating cohort had a smaller percentage of graduates who started college between the ages of 20-24 years and after 34 years of age than the 1985 and 1980 graduating cohorts.

Age at Entry	1990		1985		1980	
	N	%	N	%	N	%
<20	187	39%	267	36%	220	34%
20-24	104	22%	175	24%	161	25%
25-34	131	28%	204	27%	157	24%
>34	50	11%	100	13%	106	17%

In the past ten years, the ethnicity of the graduates in the Peralta District has changed considerably; the percentage of Asians receiving degrees has increased 62%; the percentage of Filipinos, 33% and Hispanic/Latinos, 57%. The number of degrees awarded to African Americans has declined 13%; the number of degrees awarded to whites has declined 10%.

Graduates' Ethnicity	1990 N	1990 %	1985 N	1985 %	1980 N	1980 %
Asian/Pacific Islander	97	21%	138	18%	83	13%
African American	164	35%	263	35%	257	40%
Filipino	15	3%	24	3%	6	1%
Hispanic/Latino	34	7%	38	5%	35	5%
Native American	3	1%	9	1%	5	1%
White	132	28%	208	28%	199	31%
Other/Unknown	27	6%	67	9%	60	10%

There was considerable variation in both time-to-degree and average units per term for the racial/ethnic groups in the three cohorts. No clear pattern emerged. On average, in the 1990 cohort, Native Americans and whites earned degrees in the least number of terms, followed in order by Asians, Filipinos, Hispanics and African Americans. Asians had the most average number of units per term, followed in order by Hispanics, Native Americans, Filipinos, whites, and African Americans. In the 1985 cohort, the average time-to-degree order, least number of terms to most terms, was as follows: Native Americans, whites, Filipinos, Asians, Hispanics, and African Americans. The 1980 order was as follows: whites, Asians, Hispanics, African Americans, Filipinos, and Native Americans. In the 1985 cohort, Native Americans, Asians, and Filipinos, on average, took the most units per term; Hispanics, African Americans, and whites, the least. In the 1980 cohort, Filipinos, Asians, and Hispanics, on average, took the most units per term, African Americans, whites and Native Americans, the least.

From 1980 to 1990, the male/female degree recipient ratio has changed. Males were awarded more degrees in 1985 than in 1980 (12 % increase), then decreased again slightly (5%) in 1990. In general, the graduation rate by gender corresponds to the approximate male/female ratio in the total student population.

Graduates' Gender	1990 N	1990 %	1985 N	1985 %	1980 N	1980 %
Female	289	61%	450	63%	377	58%
Male	183	39%	294	37%	264	42%

(2 not identified in 1985; 4 not identified in 1980)

On average, females take slightly longer to graduate than males, principally because they tend to take fewer units per term.

Terms	1990 mean	1990 median	1985 mean	1985 median	1980 mean	1980 median
Female	9.26	8.15	9	8.3	7.5	6.65
Male	8.93	8	8	7.5	7.6	7

Average Units per Term	1990 mean	1990 median	1985 mean	1985 median	1980 mean	1980 median
Female	9.5	9.3	9.15	8.85	9.37	9.15
Male	10.5	10.3	10.33	9.93	10.59	10.25

The 1990 cohort "stopped out" more times and took more medium breaks (one to five years) than the 1980 cohort. Only 2% of the 1980 graduating class took a long break (six or more years) before earning a degree, compared to 7% in 1985, and 11% in 1990.

Stopouts	1990	1985	1980
Median	1	1	0
Mean	4.35	3.31	1.75
Maximum	28	25	16

Medium Breaks	1990	1985	1980
Median	1	1	0
Mean	1.31	1.33	1.13
Maximum	3	4	3
Number	117(25%)	166(22%)	98 (15%)

Long Breaks	1990	1985	1980
Median	1	1	1
Mean	1.04	1	1
Maximum	2	1	1
Number	50 (11%)	53 (7%)	14 (2%)

There is very little difference in time-to-degree or average units per term between Associate of Arts and Associate of Science degree recipients. The actual number of A.S. degrees awarded has declined considerably, although as a percentage of total associate degrees awarded per year, there has been a 9% increase in A.S. degrees awarded.

Degrees	1990 N	1990 %	1985 N	1985 %	1980 N	1980 %
A.A.	405	66%	521	67%	519	69%
A.S.	108	34%	259	33%	237	31%

Number represents total degrees awarded not headcount (students may have received multiple degrees)

SUMMARY OF FINDINGS: 1990 GRADUATES

In the spring of 1990, the Peralta colleges awarded 532 associate degrees to 472 graduates. Three-fourths of the degrees awarded were Associate of Arts degrees; one-fourth, Associate of Science degrees. Eleven percent of the students received more than one degree--44 students received a second A.A. degree, 7 students received a second A.S. degree. In most instances, these were in related fields. The 1990 graduates also earned 67 certificates of completion, generally in fields related to their major.

Students received degrees or certificates in 62 different major fields and 90 majors. The majority of the degrees were awarded in General Curriculum or in business-related majors. Degrees awarded in business-related majors included Accounting, Business Administration, General Business, Marketing and Sales, Office Clerical Skills, Secretarial Science, Small Business, and Word Processing.

A preliminary analysis of the demographics of the students receiving A.A. or A.S. degrees indicates that females were awarded 61% of the degrees; males, 39%. Over one-third (35%) of the degrees were awarded to African Americans (164); whites, 28% (132); Asians, 21% (97); Hispanics/Latinos, 7% (34); Filipinos, 3% (15); and Native Americans, .6% (3); other or unknown 5% (25). African Americans are slightly overrepresented and whites underrepresented among 1990 graduates as compared to the current percentage of their enrollment in the total student population.

Forty-five percent of the degree recipients had entered the Peralta colleges before age 21, including 3% (13) who entered before age 17. Four or 1% of the recipients had entered after age 55. The entry age of the remaining recipients were as follows: age 21-24, 17% (80); age 25-29, 17% (79); age 30-34, 11% (52); age 35-54, 10% (46). The largest percentage of degree recipients, thus, appears to be the "traditional" college students, those who entered right after or shortly after high school. Twenty-two percent of the degree recipients entered between 20 and 24 years of age; 28%, between 25-34 years of age; 11% entered at 35 years of age or older.

Almost half of the students (231) who received an associate degree continuously attended one or more of the Peralta colleges with no break in attendance. Only 10% of the students (48) had one long break of six or more years; two graduates had two long breaks. One-fourth of the students took one or more medium breaks of two to five years before completing the degree requirements. Over three-fourths of the A.A./A.S. degree recipients attended two or more of the Peralta colleges.

The median number of terms to degree is 8; the mean is 9.13. Twenty-six students (6%) graduated in 2-4 terms; 211 (45%) in 5-8 terms; 203 (43%) in 9-16 terms; 32 (7%) in 17 or more terms.

Information on the 1990 graduates is described in greater detail in the body of the study. The numbers and percentages are listed whenever applicable to enable other districts to compare their findings. Unfortunately, this hampers the readability of the text.

INTRODUCTION

The decision to undertake this study was made pursuant to an invitation extended to the Peralta District by the Los Angeles Community College District to join the national study of student outcomes and effectiveness in urban community colleges. Four urban community college districts--Los Angeles, Chicago, Philadelphia, and Peralta (Oakland-Berkeley-Alameda)--were to conduct a transcript analysis of recent degree recipients to determine the time-to-degree for urban community college students.

The districts were to replicate and expand the studies first conducted by Chicago (April 1990) and, subsequently, by Los Angeles (September 1990). Both of these studies sought to dispel the myth of the community colleges as two-year degree granting institutions.

The decision to participate in the study was also motivated by state-mandated matriculation research requirements that direct the colleges to conduct studies on student outcomes. In the past few decades, institutions of higher education have concentrated on issues of access, in particular the number of minority students enrolled. The emphasis now seems to be shifting to "success"--the number who graduate or otherwise reach their educational objectives.

The study seeks to answer the following questions:

1. Who and what are the characteristics of students who receive a degree in a public, urban, community college district?

2. How long does it typically take urban community college students to complete their degree?

3. Does time-to-degree vary significantly among different demographic groups--gender, age ethnicity, financial status?

4. What are the factors that influence the time-to-degree for different demographic groups (e.g., financial assistance, employment)?

5. How many times does a degree recipient "stopout" before completing degree requirements?

6. Does "delayed entry," students entering the community college system many years after high school, influence the time-to-degree?

7. In which majors are students being awarded degrees?

8. Does the major selected influence the time-to-degree?

METHODOLOGY

The Office of Research and Planning selected the spring of 1990 degree recipients as the first cohort to be studied. At the time the study began, this was the most recent graduating class and exit surveys were available for many of these students which would contribute additional information to the study.

The time-to-degree study was replicated for students who graduated in the spring of 1985 and the spring of 1980 (five-year intervals), to analyze emerging trends.

As in the Chicago and Los Angeles studies, a list of graduate identification numbers was created and used to access student enrollment and transcript records on the District's mainframe. Computerized records of student's transcripts extend back to the mid '70s.

Three databases were accessed: (1) a personal computer-based listing of degree recipients maintained by the Office of Admissions and Records; (2) the status of student files (/SOS) maintained on the district's mainframe; (3) transcript data (/THI) maintained on the district's mainframe.

The Status of Students (/SOS) file contains students' basic demographic data and information about the classes in which they are enrolled, including course add and drop dates.

Transcript records were assembled and downloaded for analysis with SAS-PC. For most of the degree recipients, course enrollment data, including major and grade point average, and such basic student characteristics as date of birth, gender, ethnicity, and age was available. For those students who returned the exit survey and responded to the pertinent question, additional information such as annual income, employment, financial assistance, degree aspirations, and ultimate career goal was also available.

The following data items were computed from transcript data: (1) the number of terms in attendance, (2) the number of times a student enrolled in a quarter and a semester term concurrently, (3) the number of stopouts, (4) the number of medium breaks, (5) the number of long breaks, (6) the number of Peralta colleges attended, (7) the number of units earned at the degree granting institution or "home" campus, (8) the last term in attendance, (9) the number of "W" grades or withdrawals, and (10) the number of full-time and part-time terms in attendance. The definition of these terms and the method of calculation are described in the sections below.

Records are available for all courses taken by students within the Peralta colleges. This includes the courses students took at the college granting the degree and at other Peralta colleges if they cross-registered. Approximately 75% of the 1990 degree-recipient cohort, concurrently took courses at more than one of the Peralta colleges.

The number of courses and earned units that students applied towards the degree from colleges or universities outside the Peralta District is not available on the mainframe, so those units are not included in the time-to-degree. Consequently, the time-to-degree and average units per term will be underestimated. Students who have earned a considerable number of units at colleges or universities ouside the Peralta District would have taken much longer to graduate than is indicated in this study.

Three of the Peralta colleges are on the semester system and one of the colleges is on the quarter system. Since the semester and quarter college terms overlap and students take classes concurrently in both the semester and quarter colleges, the quarter units were converted to semester units for comparison purposes. Merritt College was on the quarter system from the fall of 1967 to the summer of 1973, so units earned by graduates at Merritt College during those years were also converted.

DEFINITION OF TERMS

Grade Point Average (GPA): The grade point average is determined by dividing the total grade points earned by the total semester units attempted. Units for which a "W", "CR", "NC", or "I" was assigned are not counted in units attempted.

Cumulative Grade Point Average: The cumulative grade point average is computed by dividing the total number of units a student has attempted into the total number of grade points the student has earned. Units for which a "W", "CR", "NC", or "I" was assigned are not counted in units attempted.

Stopout: A term in which the student was not in attendance (refer to methodology for calculation of a stopout). Summer sessions were not considered in stopout counts.

Medium Break: A student is credited with a medium break if that student was not in attendance at any of the Peralta Colleges for one to five years.

Long Break: A student was credited with a long break if that student was not in attendance for six or more years at a time.

Earned Units: Earned units are the number of units the student was awarded upon completion of the class. Units are earned by students for successful completion of all courses taken for credit. Earned units may be associated with a class for which the student received either a letter grade , or a grade of "credit."

Attempted Units: Attempted units are associated only with classes for which letter grades are awarded. Attempted units are distinguished from earned units in that units earned in classes which are taken for "credit/no credit" are not included in attempted units. Attempted units provide the appropriate number of units upon which to base the calculation of grade point average.

Quarter Unit Value: One quarter unit of credit is defined as one hour of recitation or lecture (together with the required two hours of preparation for each class hour) or three hours of laboratory work each week for a quarter of twelve (12) weeks.

Semester Unit Value: One semester unit of credit is defined as one hour of recitation or lecture which requires two hours of outside preparation for each hour of recitation or lecture or three hours of laboratory work each week for a semester of 18 weeks.

Conversion of Quarter/Semester Units: Three quarter units of credit are equivalent to two semester units. To convert quarter units to semester units, the quarter units are divided by 1.5. To convert semester units to quarter units, the semester units are multiplied by 1.5.

Full-time Terms: A student is credited with full-time attendance for that term if the total number of units, semester and quarter units taken concurrently, are equal to or greater than 12 units (refer to the Full-time/Part-time Logic chart in the Appendix). Quarter units are not converted to semester equivalents before this test is applied. Summer terms are not counted toward full or part-time attendance.

Part-time Terms: A student is credited with part-time attendance for that term if the total number of units, semester and quarter units taken concurrently, in which he/she was enrolled was less than 12. (See Full-time Terms above).

Summer Terms: Credit for one summer term is given if a student was in attendance in either a semester or quarter summer session.

CALCULATIONS

Calculation of Credit Terms:

A student can receive credit for two and a half terms of attendance per academic year, if the student attended college during the summer session. A maximum of ten units could be earned during a summer term. If the student attended overlapping terms, that student was only given credit for one term. For example, if the student took a class(es) during the winter quarter and also concurrently took a class(es) at a semester college, that student was credited only with one term of attendance, because the actual time in attendance in terms of the calendar year was overlapping.

If a student attended one non-overlapping semester and one quarter term per academic year, that student was given credit for 1.66 terms. If a student attended fall semester and winter and spring quarters, that student was given credit for attendance in 2.33 terms. Attendance in fall and spring semester and winter quarter gives the student two terms, because no additional time was involved (spring quarter and spring semester overlap in time). Students were given full credit for all units earned, but did not receive duplicate credit for "term attendance" calculations if there is an overlap in time.

Because of the relative proximity of the Peralta colleges, students often enroll in a class or classes at more than one college in the district. In fact, approximately 11% of all Peralta students currently enrolled cross register. In addition to individual college schedules, a district schedule is published that lists all courses offered throughout the district and students are likely to select a class because of an instructor's reputation in the district, the convenience of the schedule, or perhaps because the course was not offered at the home campus. Theoretically, a student could take a full load both in the spring quarter and semester, in which case, the time-to-degree would be underestimated.

Calculation of Stopouts:

A student was given one stopout for each term that student was not in attendance at any of the Peralta colleges. If the student received a degree from one of the colleges, but decided to take classes at one of the other Peralta colleges for a term, that student did not get a stopout. If the

student did not enroll in any classes during the entire academic year, he/she was given two stopouts.

Since the spring semester and the winter and spring quarters overlap in time, a decision was made to count a stopout only if there was a significant lapse of attendance for an entire term, either a full quarter or semester. For example, if a student attended college during the fall semester and continued in the spring quarter, no stopout was given for missing the winter quarter (January, February, and March), since the student did attend college for a term during the second half of the academic calendar year (January-June). Summer was counted as a term taken, but not as a stopout. (Refer to the Logic for Term and Stopout Counts in the Appendix).

LIMITATIONS OF THE STUDY

The time-to-degree may be underestimated in this study, since the number of units and terms in attendance at colleges outside of the Peralta colleges was not available for computer analysis. The average units per term are probably underestimated because the figures used to calculate units attempted do not include courses taken for credit ("CR", no letter grade). Also excluded are courses from which students withdrew between the fourth and eighth week of class.

The number of remedial units that students took prior to graduation were also not available, nor were the number of curriculum changes that students made before deciding on their final major. Given time constraints and lack of available data on computer, this study did not completely replicate the Chicago and Los Angeles studies.

For the purposes of this study, twelve (12) units were selected as being equivalent to full-time attendance during a term, since this is the conventional figure used. A student who enrolls in only twelve units per term would actually need two and a half years to graduate or nine (9) terms. In the college catalogs, students are advised that in order to complete an associate degree in two years, they will need to take an average unit load of fifteen (15) units per term at the semester colleges and 18 units per term at the college on the quarter system. Some students take 18 to 25 semester units per term or 22 to 25 quarter units per term (with prior counselor or Dean of Student Services approval), in which case the actual time-to-degree would be considerably less than two years. Given the diverse course taking patterns of students, the time-to-degree is a general estimation.

The information provided by students on the admissions application and the exit surveys is self-reported. In interpreting those findings, the caveats for self-reported data should be kept in mind.

THE PERALTA COMMUNITY COLLEGE DISTRICT

The Peralta Community College District, established in 1967, is comprised of four comprehensive, public, two-year colleges. Laney and Merritt College are located in Oakland; College of Alameda, in Alameda; Vista College, in Berkeley. The colleges serve the residents of the East Bay, including the cities of Oakland, Berkeley, Alameda, Piedmont, Emeryville, and Albany. The colleges also serve many students residing outside the immediate service area.

The Peralta district is the fourth largest urban community college district in California, currently serving a diverse population of approximately 28,000 students. Enrollment has fluctuated considerably in the past decade, from a high of over 40,000 in 1981 to just under 26,500 in 1985. The number of degrees awarded has also fluctuated, from a high of 1,047 in 1975 to a low of 452 in 1989.

Approximately 60% of the students are minorities--20% Asian/Pacific Islander; 29%, African American; 8%, Hispanic/Latino; 1% Native American; 1% other non-white (Fall 1990, first census). Whites comprise 32% of the students with the remaining 9% unidentified. Forty percent of the students are male; 60% are female. On average, students take 6.1 units (7.3 units for day students; 3.8 units for extended day/evening students).

The ethnic composition of the Peralta district over the past decade has remained relatively stable, with the exception of Asians/Pacific Islanders and African Americans. Asians/ Pacific Islanders have increased nearly 55% in the last decade. The African American population fluctuates each term--enrollment of African Americans was recently as high as 37% in the Fall of 1986 and is now 29% (Fall 1990), a significant decline (Fall 1980, 32%; Fall 1982, 34%; Fall 1984, 30%; Fall 1986, 37%; Fall 1989, 28%; Fall 1990, 29%). The other or unknown ethnic categories have also shown considerable fluctuation from 15% in the Fall of 1980, for example, to 6% in the Fall of 1986.

The degree objectives of students currently enrolled is as follows: 34% indicate they plan to transfer to a four-year college or university (23% with an associate degree, 11% without an associate degree); 4% plan to get an associate degree in a vocational field; 4%, a general education associate degree; 4%, a certificate. Seven percent indicate that they are enrolled to improve basic skills; 9%, to improve job skills; 30%, for personal development. Only one-fifth of the students attend full-time; four-fifths attend part-time. Half the students are "freshmen," having completed less than thirty units. One-fourth of the students already have an associate degree or higher and are attending the colleges for career enhancement, job retraining or personal enrichment.

ASSOCIATE DEGREE MAJOR FIELDS

The Peralta colleges offer both the Associate of Arts (A.A.) degree and the Associate of Science (A.S.) degree as well as numerous certificates of completion in a large number of diverse majors. The District offers an associate degree in 125 majors; 83 A.A. degree majors and 42 A.S. degree majors. Thirty-five of the A.A. majors are in related fields (for example, secretarial science and word processing are both in the business and management 0500 top code; geography, history, urban studies, economics, Mexican and Latin American Studies and sociology are grouped under the 2200 Social Sciences top code; general curriculum, liberal arts, environmental studies, humanities, and language arts are grouped under the 4900 Interdisciplinary top code); 48 are in unrelated fields. Among the A.S. degrees, fourteen of the A.S. degree majors are in related fields; 28 are in unrelated major fields. The largest group of majors is offered in the Business category.

At the semester colleges, candidates for the associate degree must complete at least 60 units which include courses in a major, General Education, and electives. At least 19 units must be completed in General Education; a minimum of 18 units, in the major. At least 12 units must be taken at the degree-granting college. All degree recipients must have a minimum grade point

average of 2.0 ("C") in each of the following: overall grade-point average, General Education requirements, and major curriculum. All four of the colleges also have an Ethnic Studies Requirement.

At College of Alameda, the college on the quarter system, students are eligible for graduation upon satisfactory completion of 90 quarter units of course work. Students must maintain an overall grade point average of 2.0 in the required major and in General Education requirements. A major consists of at least 27 quarter units within a single discipline or declared interdisciplinary major. Occupational majors usually require more than the minimum number of units. At least 18 of the required major units must be taken at College of Alameda.

Students graduating from Vista College may complete General Education requirements at Vista or at one of the other Peralta Colleges, providing that courses taken are equivalent. At least twelve of the 60 units required for graduation must be completed at Vista.

A.A. and A.S. degrees are awarded at the end of the academic year. Students must file an application for admission to candidacy for the degree at the beginning of the term in which they plan to complete the degree requirements.

PRELIMINARY FINDINGS

In the spring of 1990, the Peralta colleges awarded 532 associate degrees to 472 graduates. Three-fourths of the degrees awarded were Associate of Arts degrees; one-fourth, Associate of Science. Eleven percent of the students received more than one degree--44 students received a second A.A. degree; 7 students received a second A.S. degree. In most instances, students who received two degrees received them in related fields.

As a percentage of the approximately 28,000 students enrolled, the number of graduates is low. It should be noted, however, that granting associate degrees is only one of the colleges' four missions. Community colleges serve a diverse population with varying needs--transfer, personal enrichment, occupational training, skill upgrading, remediation, citizenship. Indeed, it is contended that the credentialing function of the community colleges is not one of its principal missions (Adelman, 1990). Many students transfer to a four-year college or university without applying for an associate degree; many have enough units to qualify for a degree, but do not apply for the award.

Gender

A preliminary analysis of the demographics of the students receiving A.A. or A.S. degrees indicates that females were awarded 61% (289) of the degrees; males, 39% (183). This closely corresponds to the percentage enrollment of males and females currently enrolled in the district.

The time-to-degree for males and females is fairly similar. Slightly more than half (52%) of the male students graduated in 8 or fewer terms; just under half (49%) of females graduated in 8 or fewer terms. Eight percent (14 of 183) of the male students graduated in 2-4 terms; 4% (12 of 289) female students graduated in 2-4 terms. Forty-five percent of females and 44% of males

graduated in 5-8 terms; 44% of females and 42% of males graduated in 9-16 terms; 7% of females and 6% of males graduated in more than 16 terms.

There is very little difference in the stopout patterns between males and females. Forty-nine percent of females have no stopouts; 48% of males have no stopouts. Males and females also take the same number of medium breaks and long breaks, with the exception of two females graduates who had more than 1 long break.

Number of Stopouts	male N	male %	female N	female %
None	88	48%	143	49%
1	20	11%	23	8%
2-4	24	13%	36	12%
5-8	16	9%	32	11%
9-16	18	10%	26	9%
>16	17	9%	29	10%
Total	183	100%	289	100%

Number of Medium Breaks	male N	male %	female N	female %
None	137	75%	218	75%
1	36	20%	54	19%
2	6	3%	12	4%
>2	4	2%	5	2%
Total	183	100%	289	100%

Number of Long Breaks	male N	male %	female N	female %
None	165	90%	257	89%
1	18	10%	30	10%
>1	0	0%	2	.78%
Total	183	100%	289	100%

The number of degrees awarded to males and females varied considerably, unfortunately, along traditional lines according to the major field. Females were generally awarded more degrees in "women's" areas: Public Affairs and Services, 84%; Health, 80%; Commercial Services, 80%; Business and Management, 71%; Consumer Education and Home Economics, 67%; Fine and Applied Arts, 63%; Social Sciences, 63%. Males dominated in math, science and technical fields: Engineering and Related Technologies, 88%; Mathematics, 80%; Computer and information science, 67%; Communications, 73%.

Age

Forty-five percent (211) of the degree recipients had entered the Peralta colleges before age 21, including 3% (13) who entered before age 17. Four or 1% of the recipients had entered after age 55. The entry age of the remaining recipients were as follows: age 21-24, 17% (80); age 25-29, 17% (79); age 30-34, 11% (52); age 35-54, 10% (46). Thirty-seven percent entered between the ages of 17 and 19: 7% (35) at age 17, 21% (98) at age 18, 9% (41) at age 19.

The youngest age at entry was 15 years; the oldest age at entry was 64 years. The average age at entry of the graduates was 24 years; the median age 21.

It is projected that with rising tuition rates at four-year institutions, the shift away from remediation by the University of California system, and earlier application deadlines at college in the State University system, there will likely be an increase in the number of students who enroll in community colleges right after or shortly after high school. The number of degree recipients in the 1990 cohort who entered a Peralta college before age 20 has increased 13% compared to the 1980 cohort. The 1990 over 35 year old cohort has declined 35% as compared to the 1980 graduating cohort.

Slightly less than half (49% - 231) of the degree recipients did not stopout prior to receiving the degree. Students who entered a Peralta college before age 21 were least likely to have stopouts. Only three students who enrolled in a Peralta college after age 55 had no stopouts:

No Stopouts By Age

Age	Number in Age Group	# Without Stopouts	% of Total Age Group	Percent of Stopouts
<20	211	92	44%	40%
21-24	80	36	45%	16%
25-29	79	43	54%	19%
30-34	52	26	50%	11%
35-54	46	31	67%	13%
55-64	4	3	75%	1%
Total	472	231	NA	100%

Ethnicity

Over one-third (35%) of the degrees were awarded to African Americans (164); whites, 28% (132); Asians, 21% (97); Hispanics, 7% (34); Filipinos, 3% (15); and Native Americans, .6% (3); other or unknown 5% (25).

In comparing the current ethnic composition of the graduating students with the total student population, it was found that Asians and African Americans comprise a larger percentage of the degree recipients than represented in the total student population; whites comprise a smaller

percentage. It should be noted that the racial/ethnic comparison is made for descriptive purposes only and should not be interpreted as a causal factor.

Although, on average, Native Americans, whites, and Asians in the 1990 graduating cohort earned the degree in the least number of terms relative to other ethnic and racial groups, that pattern does not hold true for the 1985 and 1980 graduating cohort. Additionally, the number of terms to degree did not exactly correspond in order to the average number of units earned per term. If students took more units per term, it would have been logical to conclude, that, on average, their time-to-degree would be shorter. Therefore, it is likely that a host of factors influence the time-to-degree.

Comparison of Ethnicity of Degree Recipients to Total Student Enrollment

Ethnicity	All Students	Percent	Degree Recipients	Percent
Asian/Pacific Islander	4,134	15%	97	21%
African American	7,507	27%	164	35%
Hispanic/Latino	2,194	8%	34	7%
Filipino	958	4%	15	3%
Native American	346	1%	3	1%
White	9,941	35%	132	28%
Other/Unknown	2,482	9%	27	5%

Spring 1990, enrollment at first census (CW1), the fourth week of class

Asian students tend to have the least number of stopouts; approximately three-fourths graduate with 1 or fewer breaks in attendance. Less than half (43%) of African-American students graduate with 1 or fewer stopouts; 15% have more than 16 stopouts, over one-fourth (28%) have more than eight stopouts. Two-thirds of white students have 1 or fewer stopouts; 71% of Hispanics have 1 or fewer stopouts.

Stopouts by Ethnicity

Ethnicity	Total	0 N %	1 N %	2-4 N %	5-8 N %	9-16 N %	>16 N %
Asian/Pac. Isl.	97	57 59%	15 15%	14 14%	3 3%	5 5%	3 3%
African American	164	63 38%	9 5%	22 13%	25 15%	21 13%	24 15%
Hispanic/Latino	34	22 65%	2 6%	5 15%	1 3%	2 6%	2 6%
White	132	71 54%	14 11%	11 8%	10 8%	13 10%	13 10%
Filipino	15	6 40%	2 13%	3 20%	3 20%	0 0%	1 6%
Native American	3	2 66%	0 0%	0 0%	1 33%	0 0%	0 0%
Total	445	221	42	55	43	41	43

Only 48 students took one long break. Four-fifths of those students were either African-American (25) or white (14). No students took more than two long breaks.

Long Breaks by Ethnicity

Ethnicity	Total	0 N %	1 N %	>1 N %
Asian/Pac. Isl.	97	95 98%	2 2%	0 0%
African American	164	138 84%	25 15%	1 1%
Hispanic/Latino	34	32 94%	2 6%	0 0%
White	132	117 89%	14 12%	1 1%
Filipino	15	14 93%	1 7%	0 0%
Native American	3	3 100%	0 0%	0 0%
Other/Unknown	27	22 88%	4 15%	0 0%

Majors

Students received degrees or certificates in 62 different major fields and 90 majors. The majority of the degrees were awarded in General Curriculum or in business-related majors. Degrees awarded in business-related majors included Accounting, Business Administration, General Business, Marketing and Sales, Office Clerical Skills, Secretarial Science, Small Business, and Word Processing.

In Business and Management, 40% of the students who received degrees had initially enrolled before age 20; 22%, between 20-24 years; 26%, between 25-34 years; 12%, after age 34. The overwhelming majority of the degree recipients in this field were females (71%); compared to males, 29%.

Forty percent (50) of the Business and Management degrees were awarded to African Americans; 33% (41), to Asians; 11% (14), to whites; 5% (6), to Hispanics; 5% (6), to Asians; 6% (8), to others. In Communications, 5 degrees were awarded to whites, 4 to African Americans, 2 to Asians. In Engineering and Related Technologies, 13 degrees were awarded to Asians, 9 to whites, 7 to African Americans, 2 to Hispanics, 1 to a Filipino. Nearly half (48% - 27) of the Health degrees were awarded to whites, 14 to African Americans, 3 to Asians and Hispanic/Latinos, 2 to Native Americans and Filipinos and 5 to others. Nine mathematics degrees were awarded, 4 to Asians, 3 to whites, 2 to African Americans and 1 to a Filipino. In Public Affairs, 13 degrees were awarded to African Americans, 7 to whites, 3 to Hispanics/Latinos, 1 to an Asian and a Filipino. In the Social Sciences, 33 degrees were awarded to African Americans, 22 to whites, 7 to Hispanics/Latinos, 5 to Asians, 2 to Filipinos, 4 to others. In Fine and Applied Arts, 4 degrees were awarded to whites and 3 to African Americans. Four degrees were awarded to African Americans in Commercial Services, 1 to an Asian. In Interdisciplinary studies, 38 degrees were awarded to African Americans, 37 to whites, 25 to Asians, 9 to Hispanics/Latinos, 2 to Filipinos, 1 to Native Americans and 14 to others. (Refer to the chart in the Appendix for a full listing of all degrees awarded by major.)

Terms

The average number of terms-to-degree was 9.13; the median number of terms was 8. The number of terms varied widely from student to student: six students graduated in two terms; one student graduated after 29 terms in attendance at a Peralta college. Approximately one-fourth of the students took less than 6 terms; one-fourth took over eleven terms to graduate.

Overlapping Terms

Sixty percent (283) of the students had no overlapping terms, that is they did not concurrently attend a semester and a quarter term. Nearly one-fourth (24%) or 114 students did attend an overlapping semester and a quarter term at least once; 9.7% had two overlapping terms; 3.6%, 3 overlapping terms; .6%, four overlapping terms; 1.5%, 5 overlapping terms; .4%, six overlapping terms.

Breaks In Attendance

Forty-three percent (205) of the students who received an associate degree continuously attended one or more of the Peralta colleges with no break in attendance. Approximately 10% of the students had long breaks of six or more years; one-fourth took medium breaks of two to five years before completing the degree requirements. Over three-fourths of the A.A./A.S. degree recipients attended two or more of the Peralta colleges. The most stopouts was 28, with an average of 4.36 stopouts. The average number of medium breaks among the 117 students who took such breaks was 1.31. Fifty students took long breaks.

Cumulative Units

The average number of cumulative units per student was 83; the median number was 79. The fewest number of units earned at a Peralta college for the degree was 17; the maximum number was 200.

Earned Units

The mean number of earned units was 82.82; the median, 79.1. One student only earned 17 units; another student earned 193 units. One-fourth of the students graduated with 108 or more earned units; 14% with 60 or fewer units.

Units Attempted

The average number of units attempted was 83.12; the median, 79.52. The least number of units attempted was 17. Five percent (23) of the students attempted 37 or fewer units; 15%, 60 or fewer units. Approximately one-fourth of the students attempted 66 or fewer units; one-fourth (113) attempted 100 or more units.

Withdrawals

The average number of withdrawals ("W" grades) per student was 4; the median number was 3. Nearly one-fourth (109) had no "W's"; 66% had 4 or fewer "W's"; 73% had five or fewer "W's".

Full-Time/Part-Time Terms

The average number of full-time terms (12 or more units) was 4.35; the median, 4 terms, the mode was also 4 terms (93, 20%). Twenty-one percent (101) of the students attended only full-time terms; 6% (28) never attended a Peralta college full-time during any term; 11% (50) attended only one term full-time and approximately 30% of the students attended 3 or fewer full-time terms. One person attended a Peralta college for 12 full-time terms before receiving a degree.

Over half of the students attended fewer than three part-time terms. The mean number of part-time terms in attendance was 3.88; the median, 2.67. Twenty-one percent did not attend any part-time terms, zero being the mode (101). One student attended 20 terms on a part-time basis.

Summer Terms

Most students were enrolled in at least one summer session while in attendance at Peralta (352). Approximately one-fourth of the students did not attend any summer session (120); 24% attended only one summer term; slightly more than half attended two or more. The most summer sessions attended was seven (2).

Grade Point Average

The mean grade point average (GPA) was 3.12; the median, 3.10. One student graduated with a 1.89 GPA (the student took some additional courses after qualifying for the degree, which lowered his overall GPA at the time of graduation). Fourteen students graduated with a 4.0 GPA. One-fourth of the students had a GPA of 2.7 or lower; one-fourth had a GPA of 3.5 or higher.

GRADUATE FOLLOW-UP SURVEY RESULTS

In an effort to evaluate educational and support services, the Peralta colleges seek feedback from graduating students through a questionnaire. Students are asked to complete the questionnaire and submit it with their petition to graduate.

For the 1990 graduating class, 328 usable questionnaires were analyzed using SAS/PC. The gender of the questionnaire respondents was close to the gender distribution of the graduating population: 125 (38%) males; 203 (62%) females. The respondents were overrepresented in the number of students who entered college in the over 35 years of age category and underrepresented in the under 20 years of age category. Only 2% of the survey respondents indicated that they had entered college before age 20; 26% between the ages of 20-24; 27% between the ages of 25-34; and 27% entered at age 35 years or more. The respondents were fairly representative of the ethnic diversity of the total graduating population. Survey respondents

were 21% Asian, 38% African-American, 25% white, 3% Filipino, 8% Hispanic/Latino, 1% Native American, and 3% other.

The majority of the respondents were single (63%); one-fourth (83) were married; 8% (25) divorced; 2% (8), separated; and one person was widowed (no marital status for 3 students).

Half of the respondents (161) indicated that their annual family or personal income was less than $15,000; 16% (51), less than $5,000; 24% (80), earned $5000-$9999; 9% (30), between $10,000-$14,999; 10% (32), between $15,000-$19,000; 8% (27), between $20,000-$24,999; 16% (52), $30,000 or more.

Approximately half of the respondents indicated that their main reason for attending a Peralta college was to prepare for transfer to a four-year college or university; one-fourth indicated their main reason was to prepare for job placement or advancement; 11%, to gain a general education and appreciation of ideas; 9%, for self-understanding and personal development; 6%, checked other; only one person indicated Veteran's benefits. (N=417--some students indicated more than one main reason.)

Of those students who indicated that transfer was their main reason for attending a Peralta college, 41% earned in excess of eighty units for the associate degree. Nearly one-fifth earned in excess of 100 units; 6% or 17 of those students earned in excess of 120 units.

Forty-four percent of the students who indicated that transfer was their main reason for attending a Peralta college were African American; 22%, white; 21%, Asian; 6%, Hispanic/Latino; 3%, Filipino; 1%, Native American; 4%, other; 1%, no data. Sixty percent of the female graduates indicated transfer as their main reason; 40%, of the male graduates. The largest percentage of students indicating transfer as their main reason for attending entered a Peralta college between the age of 20-24 years (63); 27% (55), 25-34 years; 21% (42), over age 34 years; 17% (35), no age indicated).

Forty percent of the students who indicated that their main reason for attending a Peralta college was job placement were African American; 27%, white; 19%, Asian; 9%, Hispanic/ Latino; 3% Filipino; 1%, Native American; 1%, no data. Sixty-nine percent of the students were females; 31%, males. Students who entered the colleges after age 34 constituted the largest percentage of students (37%) indicating that their main reason was job placement; 28%, ages 25-34 years; 16%, 20-24 years; 1%, under age 20; 19%, no age indicated.

Forty-five percent of the students rated the overall quality of the education received at the Peralta colleges as above average; 29%, excellent; 22%, average; 4%, poor (3, no response).

In rating their non-classroom experiences, the largest percentage of respondents (37%) only indicated average; 29%, above average; 16%, excellent; 9%, poor; 8% (26), no response.

Thirty-one percent of the survey respondents worked full-time while attending the Peralta colleges; 42%, were employed part-time (less than 30 hours per week); 21% were not employed; 2 respondents worked summers only (12 did not respond to this question).

Forty-four percent of the respondents indicated that they received financial assistance while attending a Peralta college; 51%, received no financial assistance (19, no response). The question did not specify the source of the financial aid, thus, respondents may have interpreted

the question to mean financial aid from a variety of sources, including private (family or relatives) as well as college support.

Eighty-six percent of the respondents indicated that they used the counseling services at one of the Peralta colleges. Thirty percent rated the counseling services excellent; 29%, above average; 22%, average; and only 9% (28), poor; 36 did not respond to the question. Over three-fourths (77%) of African American and Asian students rated counseling services as excellent or above average; 70% of white students, rated counseling services as excellent or above average.

Nearly three-fourths (71%) of the respondents indicated that they plan to transfer to a four-year college or university. Of those students who indicated that they plan to transfer (248), 40% (102) said they plan to attend California State University, Hayward. Seventeen percent said they plan to transfer to San Francisco State University; 13%, to the University of California at Berkeley; 3% (7), to San Jose State University; and the remainder to other colleges and universities.

PRELIMINARY CONCLUSIONS

Peralta Community College District graduates obtain degrees through diverse and complex patterns, supporting the view recently underscored by the PEW Higher Education Research Program, that the K-16 "pipeline" metaphor describing the typical student's progress through the educational system may no longer be appropriate (Wegner, 1991). The results of this study confirm that "...it is increasingly common for students to interrupt or combine schooling with work, proceeding intermittently from high school to part-time enrollment in a community college, through several phases of education and employment before completing a degree program" (Policy Perspectives, May 1991).

Although a few students earn an associate degree in two years or less that is by no means the typical attendance pattern in the Peralta Community College District. The averages that come out of this study, describe a student who is in attendance for about four full-time terms, two plus part-time terms and one to two summer sessions. In the four plus years he/she is in attendance this "average student" accumulates about eighty units before attaining a degree, twenty more than is required.

Despite their at-risk, low socioeconomic status, the shortcomings of previous schooling, and sometimes extended breaks in attendance, Peralta students remarkably persist to the degree. Students may occasionally leak out of the traditional pipeline, but it is evident that they return and earn the degree. This study reveals that stopping out for brief periods, or even somewhat longer breaks, does not preclude students from achieving their degree goals. Although two-fifths of the students follow the traditional enrollment pattern of entering a community college shortly after high school and earning a degree or certificate in two or three years, three-fifths do not follow that path. Twenty-nine percent of the Peralta graduates in the spring of 1990, entered college after the age of twenty-five, including 11% who entered after the age of thirty-five.

Fair outcomes for public systems of higher education should be defined as proportional representation and comparable graduation rates for all racial and ethnic groups (Richardson, 1991 and National Task Force on Minority Achievement in Higher Education, 1991). In the Peralta Community College District, the graduation rates of minority students appear to be at or above their percentage representation in the total student population. White students, however, appear to be underrepresented among the degree recipients--they comprise 35% of the student

population, but only 28% of the degree recipients. This discrepancy may be explained by the fact that white students in the Peralta District are overrepresented in the number of students transferring directly to four-year institutions without first earning an associate degree or that the "self-improvement" group already holding degrees is disproportionately white.

In terms of majors, Asians appear to have been awarded the most degrees in such fields as Engineering and Related Technologies and Math; African Americans in Business and Management, Commercial Services, and Public Affairs and Services, and Interdisciplinary Studies; whites, in Health.

IMPLICATIONS FOR PRACTICE

The associate degree clearly should not be considered a "terminal" degree, but an intermediate degree earned by many students on the way to their bachelor's degree. The number of students who indicated transfer as their educational goal, either with or without first earning an associate degree) has increased considerably in the past decade. In 1983, approximately one-fifth of the student population in the Peralta Community College District indicated on the admissions application that transfer was their major educational objective (Peralta Facts, 1983); in the Fall of 1990, over one-third (34%) of the total student population indicated transfer, a significant increase. On their exit surveys, approximately half of the students listed transfer to a four-year college or university as the main reason for attending a Peralta college. It is important that counselors assist students who indicate a desire to transfer with their program of study. Many self-declared transfer students do not take any transfer eligible courses during their first few terms enrolled, thereby lengthening the time enrolled in a community college. A typical transfer student usually takes more than the traditional two years of lower division work prior to transfer (McIntyre, 1987). Transfer students often begin with a vocational course sequence. In fact, nationally, more students transfer from so-called career programs than from traditional baccalaureate directive programs (Cohen, 1989).

It is important that counselors follow-up on all students who petition for a degree, not only to see if they meet the degree and major requirements, but also to see if their applications for admission to a four-year college or university have been submitted, particularly in light of the early application deadlines now being established by four-year institutions. In previous years, the California State University campuses, for example, accepted applications for the fall semester until the beginning of classes. That is no longer the case. Students planning to transfer to a four-year college or university in the fall now must begin submitting applications in November of the prior year. Many of the California State universities stop accepting applications in January for fall attendance.

Students who intend to transfer to a four-year institution should probably be advised to concentrate on satisfying transfer requirements instead of associate degree requirements, yet, as noted in this study, half of them do. By first completing requirements for an associate degree, the length of time it takes to earn a bachelor's degree is increased, because many of the associate degree requirements and units earned may not transfer. A maximum of 70 semester (105 quarter) units earned in a community college may be transferred to the University of California or California State University system. Students may receive credit towards having completed general education requirements, but units in excess of 70 do not count towards the

120 units required for the bachelor's degree. This might be an area that could be more clearly addressed in the college catalogs or student handbooks, if not already included.

Nearly half of the students who were awarded an associate degree earned in excess of 100 units. For students who took many more units than was actually required for graduation, the time-to-degree and/or transfer could perhaps be shortened through increased advising and the development of an educational plan. The Peralta colleges will be pilot testing a computerized student educational plan that will allow students to project their major and degree requirements, as well as special requirements to transfer to the University of California or California State University systems and private colleges and universities up to eight terms in advance. All course-to-course and major articulation agreements are now on-line. If a required course is not satisfactorily completed in the projected term, it will automatically be rescheduled for a future term. Additionally, if students change their major, the new requirements will automatically be projected, giving them a realistic picture and status account of time-to-degree.

Within the next few years, the state-mandated matriculation program which is now fully implemented in the Peralta Community College District should increase the number of "successful" students, including more graduates and transfers. Matriculation regulations require each of the California community colleges to establish a process for assisting students to select a specific educational goal within a reasonable time after admission. Students' academic progress must be monitored regularly to detect early signs of academic difficulty. Students must be advised of and provided with advice or referral to specialized support services or special curriculum offerings if necessary. For example, a newly-implemented computerized Early Alert system, developed pursuant to matriculation regulations, directs students experiencing difficulty in class during the first four weeks of a term to tutorial and other support services. The district also recently implemented a computerized assessment/placement system to assist students in accurately placing them in courses in which they will succeed. This should reduce the number of withdrawals, hence the time-to-degree, since students will not have to change or drop classes because of placement in inappropriate levels after the term begins.

Students often earn many more units than necessary for an A.A./A.S. degree, perhaps due to the need for extensive basic skills remediation prior to concentrating on courses in the selected major. Outreach efforts to local high schools and junior high schools should be intensified to ensure that students who intend to pursue postsecondary education will have the necessary basic skills before entrance, so that they are not unnecessarily duplicating courses they should have mastered in the middle or secondary schools. Peralta is aggressively pursuing articulation and partnership agreements with local high schools as well as four-year colleges and universities. The largest percentage of students who indicated a desire to transfer listed California State University, Hayward as the four-year institution to which they wish to transfer. The overwhelming majority of the students who actually transfer, remain within the Bay Area either at the University of California at Berkeley or the California State Universities at Hayward or San Francisco. During the Fall of 1989, for example, 165 Peralta students transferred to the University of California system--120 (73%) to the Berkeley campus; 20 (12%) to the Davis campus; 9 (5%), to the Santa Cruz campus; 3 (2%), to the Santa Barbara campus; 3 (2%) to the Irvine campus. While this is not surprising, given the proximity of the institutions, perhaps counselors could more strongly encourage qualified students to consider other campuses in the California State or University of California systems. The acceptance rates of community college transfers are higher at some of the newer campuses. Fall 1990 figures show, for example, that only 38.7% of all California community college applicants were accepted at the University of California at Berkeley, whereas

78% were accepted at Santa Barbara, 56% at Irvine, 54% at Los Angeles, 51% at Riverside, 61% at San Diego, and 58% at Santa Cruz.

One of the Peralta colleges has had a successful Transfer Center for several years and the establishment of a Transfer Center on the other three campuses, aided by supplemental state funding through the 1990 State Budget Act, should assist in making transfer information and assistance more readily accessible to students at all the colleges throughout the district. The Transfer Centers should also be instrumental in increasing the number of students from diverse ethnic/racial groups who transfer. Currently, for example, a disproportionate number of white and Asian student transfer to the University of California at Berkeley (UCB). In the Fall of 1989, white and Asian students represented over three-fourths (78%) of the students who transferred to UCB from Peralta -- 53% white, 25% Asian, 13% African American, 3% Hispanic, 1% Filipino, 1% Native American, 4% other or not identified.

Students in the Peralta District tend to major in fields along traditional lines--females in lower paying service-oriented and humanities fields, males majoring in higher paying math, science, and technical fields. More aggressive means must be taken to encourage women to major in fields that will ensure them salary equity in the employment market. The study of mathematics, for example, has long been regarded as an occupational gatekeeper (Sells, 1973, as cited by Adelman, 1991). Due largely to sex role socialization, women have historically studied less mathematics (although when they do, they earn higher grades than men, particularly in calculus and statistics). According to Adelman's study (1991), women only achieved pay equity with men in 7 of 33 major occupations. In five other categories, four of them in business-related fields, women who took more than 8 credits in college-level mathematics achieved pay equity.

Some of the majors in which students appear to have been awarded the most degrees with the least interruptions, are majors in which the requirements are clearly outlined and prescribed, such as in the health and engineering and related technologies fields. Departments in which very few students have earned a degree or certificate in the past ten years may need to review their recommended course sequence and curriculum to see if students' needs are being met. It should be noted, however, that given the diverse missions of the community colleges, the goal of particular departments and programs may not necessarily be geared toward granting a degree or certificate.

The district did not award many degrees in certain majors in which job opportunities are high. Only three degrees were awarded in computer and information sciences, for example. While it is possible that students interested in this area transferred to a four-year college without an associate degree, nonetheless, the colleges should try to investigate ways to increase the numbers of both males and females majoring in growing or high demand fields to increase their chances for successful employment.

Several ethnic groups appear to be overrepresented in certain majors and underrepresented in others. There were 57 degrees awarded in the health sciences, for example, nearly half (47%) of the degree recipients in this field were awarded to white students, another 25% were awarded to African American students; only 5% were awarded to Asians, 5% to Filipinos, 5% to Hispanics, and 4% to Native Americans. The lack of minority, female, or disabled faculty in certain departments may be discouraging students from majoring in those disciplines. The colleges need to ensure that there is a diverse faculty that can serve as role models for all students. Prerequisites should be examined to ensure that disproportionate numbers of minority students are not inadvertently being screened out. Enrollment patterns should be examined to ensure that

stereotyping, differential treatment, and other barriers are not excluding students of a certain gender or ethnic/racial group from successful course or degree completion in that major.

The fact that so many of the students in the Peralta colleges concurrently or at some time in their educational career enroll in one or more of the colleges in the district, emphasizes the need for articulation and perhaps uniform policies and procedures in appropriate areas. The District has just adopted uniform requirements for the associate degree.

FURTHER STUDIES

This was a retrospective study of a graduating cohort. The Office of Institutional Development intends to conduct a companion study that looks at an entering cohort to see what percentage of an entering cohort receives a degree within a certain time frame--five to ten years.

There is a significant population of students enrolled in the Peralta Colleges which has earned enough units for a degree, but does not apply to receive the degree. There are also many students enrolled who have indicated transfer as their goal, yet are still enrolled in a Peralta College long after they have accumulated the necessary units and grade point average to transfer. An interesting study could be conducted to determine exactly why these students have not applied for a degree and/or have not transferred. Are these students "lifetime learners" who do not need the degree for higher salary placement or job application? Do students or employers not consider the A.A. degree valuable? Are students undecided about a major and accumulating units in diverse fields? Do they need to take extra units to improve their transfer GPA? Do they want to earn as many units as possible at a community college before transferring to save money on tuition and other fees?

Since over half of the students who received a degree in 1990 indicated on their exit survey that their main reason for attending a Peralta college was to transfer, it would be interesting to follow-up on those students to see how many actually were able to transfer. The Peralta colleges plan to continue to participate in the Transfer Assembly Project conducted through the Center for the Study of Community Colleges. The results of that study should help answer those questions.

Basic Skills classes were recently renumbered in the Peralta District. In the current database, remedial classes have only been flagged since 1988. For this study, without staff for extensive programming, it was not possible to determine how many of the graduating students' units were in remedial classes. With the recent 30 semester and 45 quarter unit limit on the number of remedial classes that students may take in any one California community college district, further studies should be conducted on the effect this will have on the number of students receiving a degree and/or their time-to-degree. Do Peralta students generally take a large number of basic skills courses on their way to a degree or transfer? Will the remedial course limit discourage students from completing degree requirements?

The number of degrees awarded annually has fluctuated considerably over the past two decades. In 1975, for example, the Peralta colleges awarded a total of 1,047 degrees; in 1989, only 452 degrees. Further studies should be conducted to determine the principal factors that influence the number of degrees awarded. Is the total student enrollment two to four years prior to graduation a determining factor? In 1975, for example, there were 4.25 million 18-year olds around the country, the peak of the post-World War II baby boom, compared to only 3.3 million

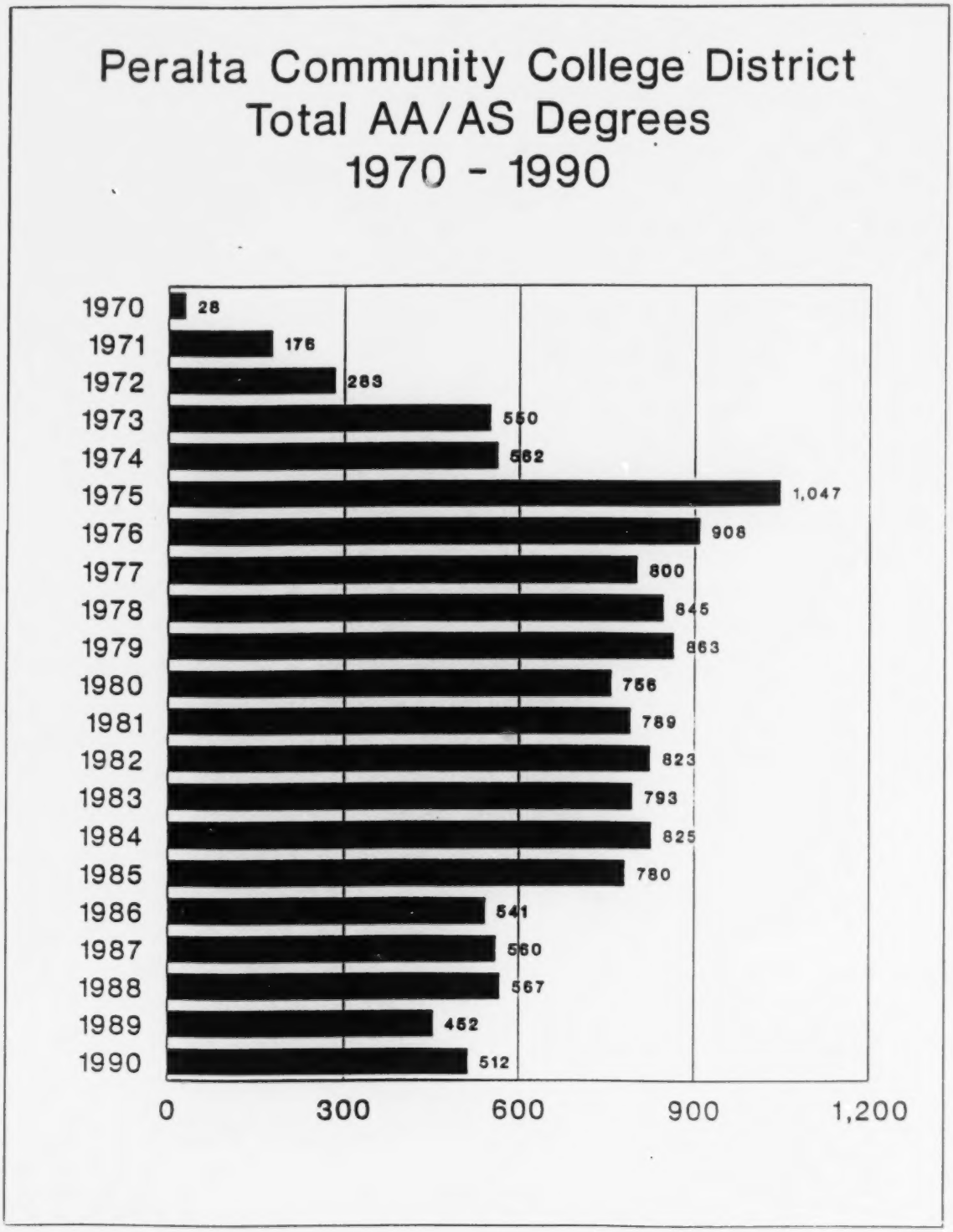
in 1991. Do the general economic conditions in the Bay Area influence the number of degrees awarded? When the employment picture is poor, are students likely to stay enrolled in college, even if they do not need the additional units to graduate? How much is the fluctuation in the number of degrees awarded attributable to program changes at the colleges? Are certain programs or majors that used to produce a larger number of degree recipients no longer offered? Are certain programs offered at the colleges no longer in high demand or out-dated in terms of the curriculum or equipment?

In California, the elimination of remedial courses, fee increases, and planned university admissions reductions are projected to spawn an increase in community college enrollment. It is important, therefore, to fully examine and understand the factors that influence time-to-degree, so that students who are redirected to the community colleges do not unnecessarily extend their time-to-degree or transfer.

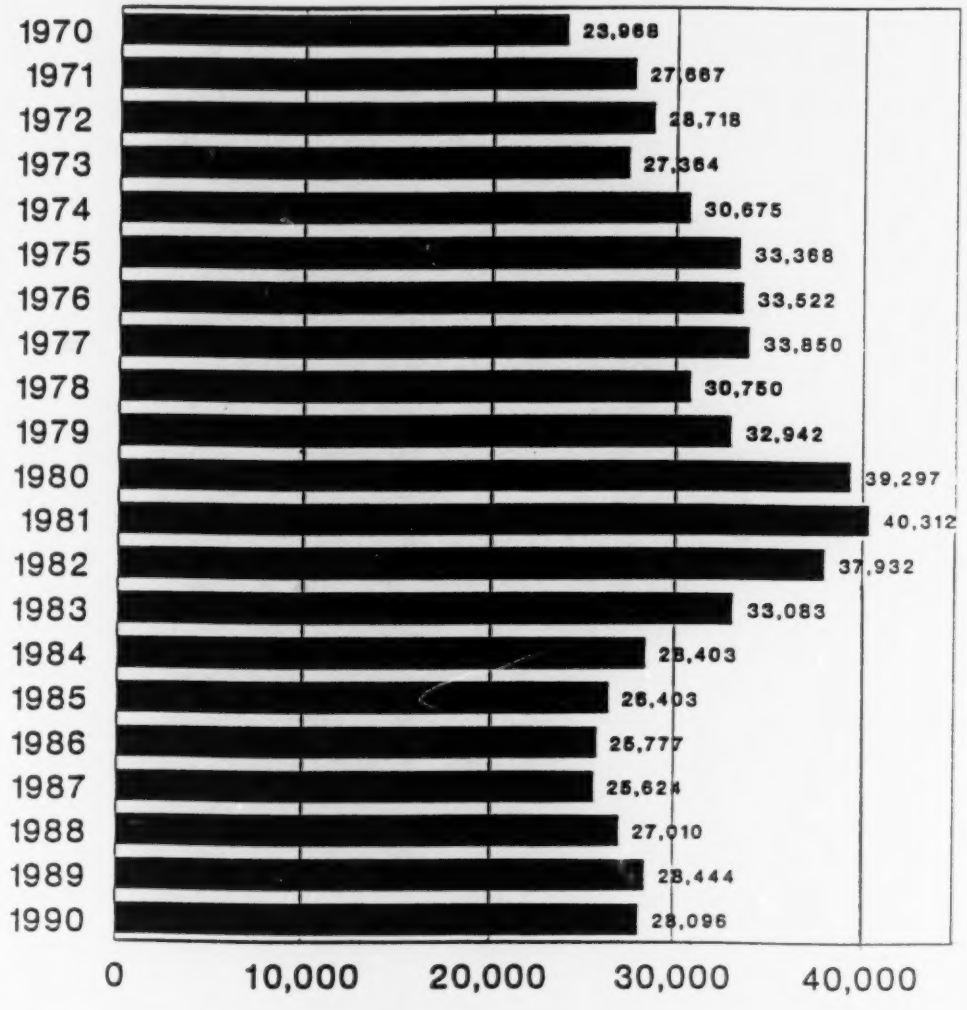
Further studies should also be conducted on the number of units that students apply to a Peralta degree from other colleges or universities. Transcripts from other colleges are available and reviewed on paper, but are not available in the district mainframe for computer analysis. It would be interesting to note the average number of units that students typically transfer and the effect on the overall time-to-degree. Are the majority of the degree recipients in Peralta "new" students? How many of them are transfers from other colleges or universities?

A careful analysis of the results of the time-to-degree studies from the four participating urban districts--Chicago, Los Angeles, Philadelphia and Peralta--also, of course, needs to be done. Community colleges in large urban areas serve as the main point of entry to higher education for many previously excluded at risk, underrepresented and economically disadvantaged students. It is vital that students at urban as well as suburban or rural community colleges meet their educational objectives in a timely and productive manner.

APPENDIX


Peralta Community College District
Total AA/AS Degrees
1970 - 1990
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
28
176
283
550
562
1,047
908
800
845
863
756
789
823
793
825
780
541
560
567
452
512
0
300
600
900
1,200

Peralta District Enrollment
Fall 1979 - Fall 1990



Source: Dept. of Finance, 10/1/90
•1972-78 figures are an annual average

ETHNICITY OF TOTAL STUDENT POPULATION

Ethnicity	1990	1985	1980
Asian	20% (5,464)	17% (4,661)	9% (3,827)
African American	37% (8,241)	28% (7,623)	37% (12,829)
Hispanic/Latino	8% (2,237)	6% (1,588)	5% (2,090)
Native American	1% (449)	1% (219)	1% (494)
White	32% (8,874)	35% (9,548)	36% (15,038)
Other	1% (361)	8% (2,082)	4% (361)
Unknown	9% (2,493)	7% (1,909)	13% (5,503)
Total	28,096	27,623	40,142

Based on Fall figures, First Census (CW1)

AGE OF TOTAL STUDENT POPULATION

Age of Total Student Enrollment	1990 % N	1985 % N	1980 % N
<17	1% (246)	1% (236)	1% (330)
17-20	18% (5,006)	16% (4,511)	18% (7,256)
21-24	17% (4,636)	16% (4,373)	16% (6,781)
25-29	16% (4,611)	16% (4,508)	19% (7,776)
30-34	13% (3,585)	14% (3,912)	15% (6,001)
35-54	27% (7,489)	23% (6,283)	19% (8,026)
55-64	3% (976)	4% (1,231)	5% (2,134)
>64	6% (1,547)	9% (1,231)	7% (3,006)

Based on Fall figures, First Census (CW1)

GENDER OF TOTAL STUDENT POPULATION

Gender of Total Student Enrollment	1990 % N	1985 % N	1980 % N
Female	58% (16,345)	56% (15,537)	55% (22,929)
Male	40% (11,285)	40% (11,171)	40% (16,603)
Unidentified	2% (466)	3% (917)	4% (1,798)

Based on Fall figures, First Census (CW1)

EDUCATIONAL OBJECTIVE OF TOTAL STUDENT POPULATION

Objective	1990 % N	1985 % N
Transfer	34% (9,351)	22% (5,995)
Associate Degree	9% (2,597)	14% (3,916)
Certificate	4% (1,130)	10% (2,661)
Other	52% (14,293)	49% (13,407)
Not Identified	0	6% (1,646)

Fall 1980 figures not available. Based on Fall figures, First Census (CW1)

ENROLLMENT STATUS OF TOTAL STUDENT POPULATION

Enrollment Status	1990 % N	1985 % N
New	25% (7,074)	27% (7,395)
New Transfer	10% (2,745)	8% (2,262)
Continuing	46% (12,998)	46% (12,782)
Returning	18% (4,918)	17% (4,661)
Returning Transfer	1% (361)	1% (328)
High School	(in new student category)	1% (201)
Not Identified	0	(16)

Fall 1980 figures not available. Based on Fall figures, First Census (CW1)

TERMS-TO-DEGREE BY AGE GROUP

Terms <20 years	1990	1985	1980
Median	8.15	8	7
Mean	9.06	8.87	7.65
Minimum	3.5	2	1.65
Maximum	28.7	23.3	16.6
Total Graduates	187 (40%)	267 (35%)	220 (34%)

Terms 20-24 years	1990	1985	1980
Median	8.35	7.35	6.5
Mean	9.49	8.03	7.40
Minimum	2	1.5	1.35
Maximum	29	19.4	19
Total Graduates	104 (22%)	176 (23%)	161 (25%)

Terms 25-34 years	1990	1985	1980
Median	8	8	7
Mean	9.11	8.39	7.66
Minimum	2	1	1.5
Maximum	25.1	19.6	19.6
Total Graduates	131 (28%)	204 (27%)	157 (24%)

Terms >34 years	1990	1985	1980
Median	7.58	8.5	7.15
Mean	8.72	9.35	7.75
Minimum	2	1	1
Maximum	23.9	30.8	18.0
Total Graduates	50 (11%)	100 (13%)	106 (16%)

AVERAGE UNITS PER TERM BY AGE GROUP

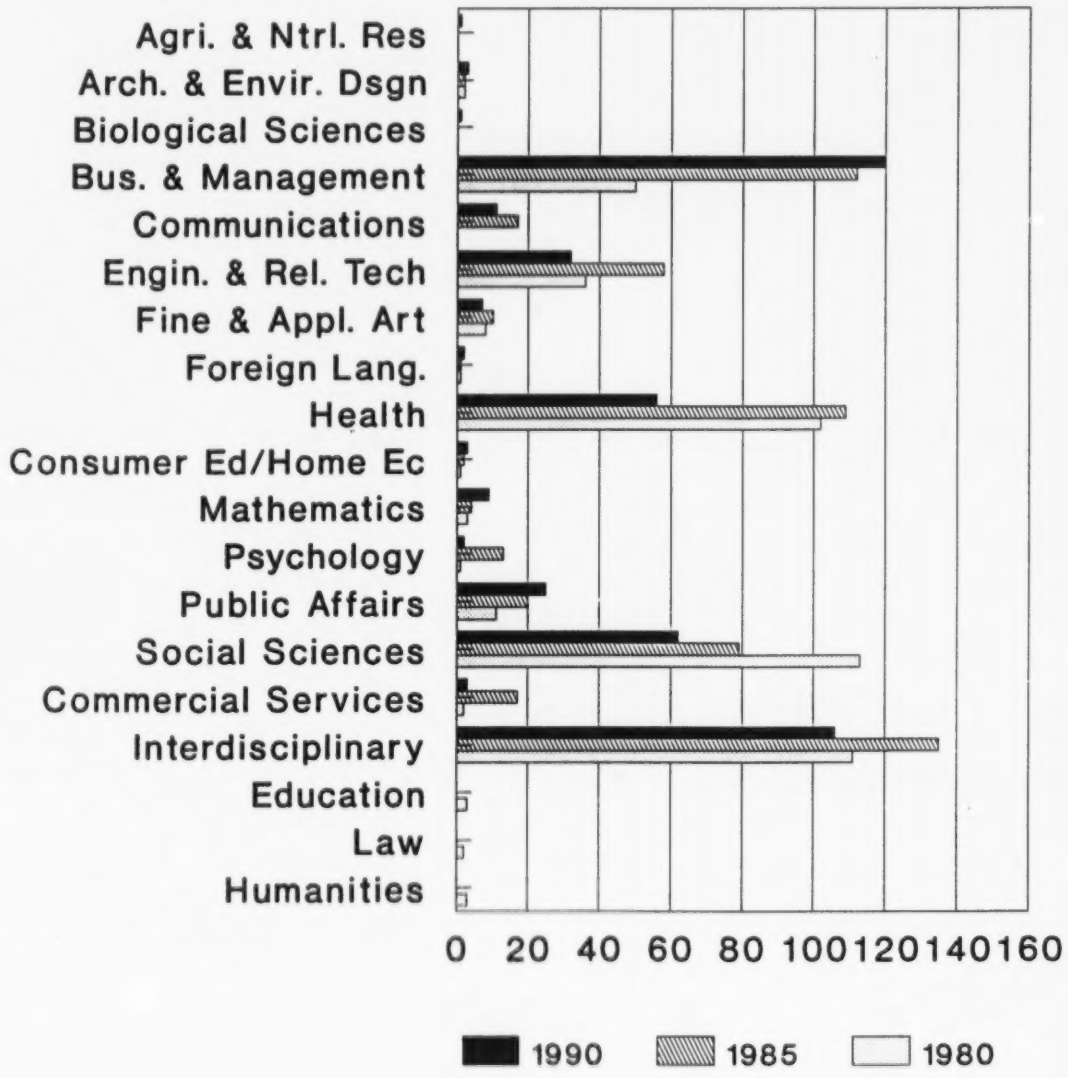
Terms <20 years	1990	1985	1980
Median	10.2	9.7	10.3
Mean	10.57	10.17	10.34
Minimum	3.88	3.05	4.15
Maximum	24.15	18.75	21.3
Total Graduates	187 (40%)	267 (35%)	220 (34%)

Terms 20-24 years	1990	1985	1980
Median	8.85	9.3	9.6
Mean	9.31	9.7	9.96
Minimum	2.12	3.1	4.25
Maximum	21	28	26.31
Total Graduates	104 (22%)	176 (23%)	161 (25%)

Terms 25-34 years	1990	1985	1980
Median	9.3	8.93	8.95
Mean	9.54	9.35	9.52
Minimum	2.7	2.25	1.3
Maximum	21	28	28
Total Graduates	131 (28%)	204 (27%)	157 (24%)

Terms >34 years	1990	1985	1980
Median	9.43	8.5	9.55
Mean	9.61	8.44	9.46
Minimum	3.75	3	1.9
Maximum	17.2	22	17.5
Total Graduates	50 (11%)	100 (13%)	106 (16%)

Degree Comparison
1990/1985/1980



PERALTA COMMUNITY COLLEGE DISTRICT
GRADUATE FOLLOW-UP

In an effort to evaluate educational and support services, the Peralta Community College District seeks feedback from graduating students and students receiving certificates. This questionnaire is designed to assess the characteristics of graduating students and students receiving certificates. The questionnaire will be used to assist in the improvement of services to students. Please answer all questions and return the questionnaire with your petition to graduate. The information you provide will remain totally confidential.

1. Social security number? [_____]

2. Sex? Male [___] Female [___] Age? [_____]

4. Ethnicity? Asian [___] Black [___] Caucasian [___] Filipino [___]
Hispanic [___] Native American [___] Other [___]

5. Marital status? Single [___] Married [___] Divorced [___]
Widowed [___] Separated [___]

6. Your family's annual income is: (Single persons living alone or with unrelated persons should give their personal income.)

Under $5,000	[___]		
$5,000 to $9999.99	[___]	$10,000 to $14,999.99	[___]
$15,000 to $19,999.99	[___]	$20,000 to $24,999.99	[___]
$25,000 to $29,999.99	[___]	$30,000 and Over	[___]

7. What was your main reason for attending College of Alameda?

[___] 1. to prepare for transfer to a four-year college or university
[___] 2. to prepare for job placement or advancement
[___] 3. to gain a general education and appreciation of ideas
[___] 4. self-understanding and personal development
[___] 5. Veteran's benefits
[___] 6. other (please specify)_____
_____

8. Why did you choose College of Alameda rather than some other college? How important was each reason in deciding to come here? (Mark one answer for each statement.)

	Very Important	Somewhat Important	Not Important
My parents or relatives wanted me to come here			
This college has a very good reputation.			
Because of lower enrollment fees			
Someone who had been here before advised me to go. . .			
I thought it would be easier than other schools. . . .			
I was not accepted anywhere else			
My high school guidance counselor advised me to go . .			
This college was close to home			
Because of the special education programs offered. . .			

(Specify)_____
Other (specify)_____

9. How would you rate the overall quality of the education you received at College of Alameda?
[___] 1. Excellent [___] 2. Above average [___] 3. Average [___] 4. Poor

10. How would you rate your overall non-classroom experiences at College of Alameda?
[___] 1. Excellent [___] 2. Above average [___] 3. Average [___] 4. Poor

11. If you attended any other two-year or four-year college(s) or university prior to enrolling at College of Alameda for the first time, please indicate the name(s) of the school(s).

_____
_____
_____
_____

12. Were you employed during the time you attended College of Alameda?
[___] 1. full-time (30 hours or more per week)
[___] 2. part-time (less than 30 hours per week)
[___] 3. summers only
[___] 4. no

13. Did you receive financial assistance while attending College of Alameda?
[___] Yes [___] No

14. Did you use College of Alameda's counseling services? [___] Yes [___] No
If Yes, how would you rate the overall quality of the counseling you received?
[___] 1. Excellent [___] 2. Above average [___] 3. Average [___] 4. Poor

15. Do you plan to transfer to a four-year college or university?
[___] Yes [___] No

If yes, to which of the following colleges do you plan to transfer?
[___] 1. Cal State University, Hayward [___] 2. San Francisco State
[___] 3. UC Berkeley [___] 4. San Jose State
[___] 5. Golden Gate College [___] 6. St. Mary's College
[___] 7. Holy Names [___] 8. Mills College
[___] 9. California College of Arts and Crafts
[___] 10. Other (please specify)_____

16. What is the highest degree you intend to earn?
[___] 1. Certificate [___] 2. Associate [___] 3. Bachelor's
[___] 4. Master's [___] 5. Doctorate
[___] 6. Medial Degree (M. D., D.O., D.D.S., or D.V.M.)
[___] 7. Law Degree (LL.D. or J.D.)
[___] 8. Other (please specify) _____

17. What is the highest degree you have earned to date?
[___] 1. G.E.D. Year Passed _____
[___] 2. High School Diploma - High School _____ Year_____
[___] 3. Associate [___] 4. Bachelor's
[___] 5. Master's [___] 6. Doctorate
[___] 7. Medial Degree (M. D., D.O., D.D.S., or D.V.M.)
[___] 8. Law Degree (LL.D. or J.D.)
[___] 9. Other (please specify) _____

18. What is your ultimate career goal (i.e., what occupation do you intend to pursue)?

_____

I understand that the above information will be used only for statistical purposes.

_____ _____
Signature Date

Logic for Term & Stopout Counts

	Academic Year														Summer	
	Fall Semester					Fall Quarter only				No Fall Term					Ms	Mq
	Ss	Sq				Ss	Sq			Ss	Sq					
		Wq		Wq			Wq		Wq			Wq		Wq		
T	2	2.33	1.66	1.66	1	1.66	2	1.66	1.66	.66	1	1.33	.66	.66	0	.5	.33
S	0	0	0	0	1	0	0	0	0	1	1	1	1	1	2	0	0

Ss = Spring Semester
Sq = Spring Quarter
Wq = Winter Quarter
Ms = Summer Semester
Mq = Summer Quarter

T = Terms
S = Stopouts

N/A = Not Application

Avg units/term = $\frac{\text{Attm uts}}{\text{terms}}$

(non overlapping term count)

LOGIC FOR FULL-TIME/PART-TIME TERM COUNTS

	Academic Year								
	FallS		FallQ	SpringS				SpringQ	WinterQ
	FallQ			WinterQ		SpringQ			
	Sunits+ Qunits >11	Sunits >11	Qunits >11	SpringQ					
				Sunits+ (greater of Wq units or Sq units) >11	Sunits+ Qunits >11	Sunits+ Qunits >11	Qunits >11	Qunits >11	Qunits >11
If test passed:									
FT	1	1	0.66	1	1	1	1	0.66	0.66
If test failed:									
PT	1	1	0.66	1	1	1	1	0.66	0.66

SpringS = Spring Semester
SpringQ, Sq = Spring Quarter
WinterQ, Wq = Winter Quarter
FallS = Fall Quarter

Sunits = Semester Units
Qunits = Quarter Units

FT = Full-time Terms
PT = Part-time Terms

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